Claims after this response:

1. (Currently Amended). A method for operating a data processing system to simulate a mixer having a known design, said mixer having an RF port, a LO port, and an IF port, said method comprising generating an estimate, b2, of the output signal leaving said IF port when an input signals a1, a2, and a3 are applied to said RF port, said IF port, and said LO port, respectively, wherein ~~comprising the steps of:~~

~~defining an input signal, a2, to said IF port;~~

~~defining an input signal, a1, to said RF port; and~~

~~representing the signal, b2, leaving the IF port by~~

$$b2 = f(a1, a3) + S22 * a2$$

where:

S22 is a constant, ~~a3 is a signal input to said LO port,~~ and

$$f(a1, a3) = \sum_{i=0}^{M} \sum_{j=0}^{N} C_{ij} * a1^i * a3^j$$

said coefficients C_{ij} being constants that depend on said mixer design and wherein M and N are integers greater than 0.

2. (Currently Amended). The method of Claim 1 wherein said coefficients C_{ij} are determined by measuring a signal leaving said IF port ~~the b2~~ when a1 and a3 are single tone signals.

3 (Currently Amended). The method of Claim 1 wherein the coefficients C_{ij} are determined by simulating said mixer on a non-linear circuit simulator and determining a signal leaving said IF port when a1 and a3 are single tone signals.

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